PENDING CLAIMS

1.   (Original) A periodic digital signal detector apparatus, comprising:

means for matched filtering a portion of a periodic digital signal, said portion having a duration smaller than a duration of the periodic digital signal;

means for determining a phase offset of the periodic digital signal based on matched filtering of said portion of the periodic digital signal;

means for correlating the periodic digital signal;

means for searching for a first match between the periodic digital signal and a first expected digital signal;

means for providing a relative time when the first match occurs;

means for determining an offset of the periodic digital signal based on the relative time and an absolute time; and

means for providing said offset information to the correlator.

2.   (Original) The apparatus of claim 1, wherein the means for searching for a first match between the periodic digital signal and a first expected digital signal comprises means for searching for a match over the full sequence comprising the periodic digital signal.

3.   (Original) The apparatus of claim 1, further comprising means for providing a metric of a match quality.

4.   (Original) The apparatus of claim 1, further comprising:

means for searching for a second match between the periodic digital signal and a second expected digital signal; and

means for providing an indication if the second match occurs.

5.   (Original) The apparatus of claim 4, wherein the means for searching for a second match between the periodic digital signal and a second expected digital signal comprises:

means for searching for the second match between the periodic digital signal and the second expected digital signal having a phase offset equal to a phase offset of a signal transmitted by a base station to which a mobile unit is currently synchronized.

6.   (Original) The apparatus of claim 4, wherein the means for searching for a second match between the periodic digital signal and a second expected digital signal comprises a matched filter.